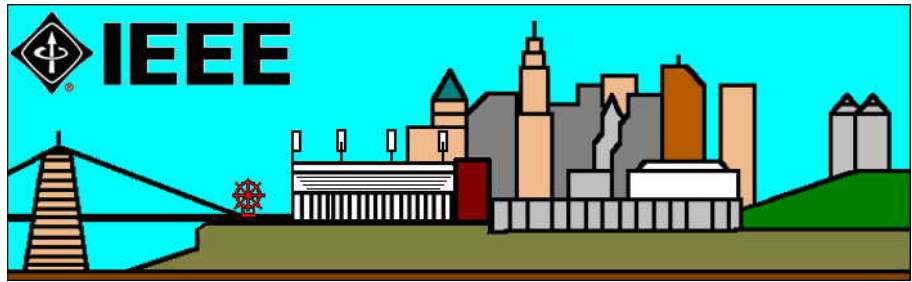


**IEEE CINCINNATI
SECTION
NEWSLETTER
SEPTEMBER 2005**



SEPTEMBER MEETING WHY BE A LICENSED P.E.?

DATE: Thursday, September 22, 2005

PLACE : Raffel's – 10160 Reading Road (see below for directions)

TIME : 5:30 p.m. to 7:00 p.m. - Social Time/Dinner
7:00 p.m. to 8:30 p.m. - Program

COST FOR DINNER: \$10.00 for Student Members
\$15.00 for Members
\$20.00 for Non-Members

MENU SELECTIONS: Maryland Crab Cakes, Baked Pork Chops with Baked Apples, Boneless Chicken in Sherry Wine Sauce, Twice Baked Potatoes, Wild Rice, Sauteed Vegetables, Tossed Salad, Dinner Rolls and Butter, Assorted Bar Cookie, Coffee, Tea Iced Tea, Soft Drinks. There is also a bar available for the purchase of alcoholic drinks. Raffel's is located at 10160 Reading Road, south of Glendale-Milford Road on the east side of Reading. Take I-75 to the Glendale-Milford Rd. Exit, go east on Glendale-Milford Road approximately 3/4 of a mile to Reading Rd. and turn right on Reading.

Please call the Cincinnati Section Voice Mailbox at **513-629-9380**, by **Noon, Tuesday, September 20, 2005** if you plan to attend. Please leave your Name, IEEE Member Number, and a daytime telephone number. You can also make a reservation by e-mailing our Arrangements Chair, Charlie Nash, at cnash@ieee.org.

ABOUT THE PRESENTATION: This month's meeting will feature a presentation Mr. Mark T. Jones, PS, the Executive Director of The Ohio State Board of Registration for Professional Engineers and Surveyors.

In virtually every state in the country (including Ohio), licensure as a Professional Engineer (PE) is not required for individuals who design "manufactured products". This exemption, commonly known as the "industrial exemption", has been a part of Ohio law since the registration act for engineers and surveyors was first enacted in 1933. As a result, a large percentage of graduate engineers involved in the design of manufactured products don't seek licensure as a PE. This presentation will demonstrate the value of becoming licensed as a PE at an early age even if not required by law to do so.

ABOUT THE PRESENTER: Mr. Jones, a Professional Surveyor since 1974, has been the Executive Director of the State Board of Registration for Professional Engineers and Surveyors since May 1994. In his capacity, Mr. Jones is responsible, under the direction of the Board, for all operations of the Board and its full time staff of eight people. The Board is composed of five members appointed to staggered five year terms by the Governor, and meets bi-monthly to establish Board policies, approve staff recommended applications for

licensure and examinations, review budgetary and legislative matters, and to consider disciplinary actions. Mr. Jones is heavily involved in all aspects of the Board's operations including disciplinary, budgetary and legislative matters.

Prior to his appointment by the Board as Executive Director in 1994, Mr. Jones had been in private practice since 1964 and was also the Executive Director of the Professional Land Surveyors of Ohio (a part-time position) between December 1977 and May 1994.

UPCOMING CINCINNATI SECTION MEETING TOPICS

In the coming months, our Section Meetings will feature the following topics:

October 27, 2005	Wireless Systems & Communications - Freescale Semiconductor's ZigBee Technology
December 8, 2005	Altera soft CPUs (NIOS) and system on a chip
January 26, 2006	Continuing Professional Development requirements for PEs

We hope to see you there!!!

CHAIR'S MESSAGE

by Jim Everly, Section Chair

Welcome back! I hope that you enjoyed your summer activities. This month's section meeting focuses attention on the requirements for the Professional Engineers Exam. Subsequently, a follow-up meeting will focus on renewal requirements.

The Cincinnati Section currently has about 75 IEEE Senior Members and I have set a goal of adding another 25 members by this time next year. If you are interested in elevating your IEEE membership to Senior Member, be sure to attend this month's meeting. After the technical presentation I will hold an informal session on how to prepare a senior member application. After the October technical meeting I will assemble a team of senior members to write letters of recommendation in support of your application. I will then submit your application package for processing by the IEEE Admissions and Advancement Committee. Make sure that you attend both the September and October Cincinnati Section meetings if you wish to elevate your membership status.

Every three years IEEE conducts a Sections Congress to establish the "top ten" list of IEEE priorities for the next three years. This year the 2005 Sections Congress will be in Tampa, Florida, during the month of October. Please communicate your concerns about IEEE priorities and I will input them at the Region 2 meeting.

MEMBERSHIP NEWS

NEW MEMBERS

The following individuals are IEEE members who are new to our Section:

Kyle L. Binns
Dmitriy S. Garmatyuk
Jason F. Kipp
Rajesh Krishnan
Wim J. Kruger
Jin-Hwan Lee

We wish to welcome these new members to our Section!!!

THE CINCINNATI SECTION HAS FIVE NEW SENIOR MEMBERS!!

Please join us in congratulating our newest Senior Members:

**Douglas Durst
Ronald C. Hart
Anthony S. Locker
Brian J. Resnick
Randall C. Restle**

If you are interested in upgrading to Senior Member, please contact the Executive Committee (see contact info at the end of this newsletter).

Frederick Terman and the 100th Birthday of Eta Kappa Nu

Submitted by Dick Reiman, Historian

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"IEEE-USA News & Views", March 2004.*

The University of Illinois formed the honorary society, Eta Kappa Nu, in 1904. Its principal objective is to encourage excellence in electrical and computer engineering; and it conducts programs that reward leadership and good citizenship at both the student and alumni levels. Student chapters undertake numerous projects, including tutoring fellow students and participating in National Engineers Week with technical demonstrations and exhibits. Eta Kappa Nu also recognizes outstanding electrical and computer engineering student, faculty, career engineer and engineering manager accomplishments, irrespective of their Eta Kappa Nu membership. In recent years, it has developed programs and services in cooperation with the IEEE that can be of mutual benefit to members of both organizations. A college chapter invites undergrad and graduate students to join, based primarily on superior scholarship. They may also elect career engineers for "meritorious work in the profession and allied pursuits."

Eta Kappa Nu will celebrate its 100th anniversary in 2004. During its first century, it elected some 120 electrical and computer engineering leaders to its highest grade: Eminent Member. Among the Eminent Members are corporate executives and company founders William Hewlett and Simon Ramo; leaders in government Vannevar Bush and Jerome B. Wiesner; Nobel Prize winners Jack Kilby and Charles Townes; IEEE medal winners and past presidents Ivan Getting and Donald Fink, educators Ernst Weber and Mischa Schwartz; and inventors Lee de Forest and John Bardeen.

One Eminent Member who illustrates engineering excellence and service to the professional community is Frederick Terman. Born June 7, 1900, in English, Ind., Terman studied under Vannevar Bush at MIT, before beginning his lifelong teaching career at Stanford University in 1925. Terman's research into radio circuits, and his publications, helped establish the academic field of electronics. In 1932, Terman published *Radio Engineering*, an advanced text that taught how to calculate the performance of radio circuits "with the same certainty and accuracy that the performance of other types of electrical equipment, such as transformers, motors, and transmission lines, is analyzed." Universities internationally adopted his textbook. Terman wrote two other highly influential books: *Measurements in Radio Engineering* (1935) and *Radio Engineers' Handbook* (1943). Terman is often called "The Father of Silicon Valley." He received a National Medal of Science, and also the

Medal of Honor from the Institute of Radio Engineers. Terman died on December 19, 1982, in Palo Alto, California.

*James E. Brittain
School of History, Technology, and Society
Georgia Institute of Technology*

IEEE NEWS

IEEE Mentoring Program Pilot Invitation

IEEE is offering its members the opportunity to participate in an online program designed to match IEEE members for the purpose of facilitating a mentoring partnership. We value your involvement in IEEE activities and ask that you use your career and life experiences to help other IEEE members in their professional development through a mentoring partnership.

IEEE is partnering with The Training Connection, a vendor that has developed a web-based mentoring program to facilitate the matching process. Participation in the Region 1 (Northeast U.S.) pilot program is voluntary and has now been extended to include IEEE members residing in Regions 2 and 3 (Eastern and Southeastern U.S.) above the grade of Student Member. If you are interested in participating, or would be interested in additional information on the program, go to <http://www.ieee.org/mentoring>. This IEEE site also provides the information necessary for access to enter the program's web site by offering the Group ID.

We hope that you have the interest and time to participate! If you have any questions, please contact Cathy Downer, IEEE Mentoring Program Coordinator at <mailto:c.downer@ieee.org>.

IEEE's "The Institute" On-Line

The updated issue of IEEE's "The Institute" is always available on-line at <http://www.ieee.org/theinstitute>. Check out some of these items which are featured:

- Students Rock on Web Radio: Many IEEE student members at college radio stations are bursting their campus confines by streaming radio programs over the Internet. Find out more at <http://boldfish.ieee.org/u/411/04824637>
- Teaching Real-World Lessons: Senior Member Kevin Kornegay, a Cornell electrical and computer engineering professor, knows that there is life after school for his students. Engineering graduates must be able to handle the instruments used in the real world of industry, solve complex problems and, perhaps most important, play well with others, as they say in elementary school. With that in mind, Kornegay has forged a unique alliance between industry and academia for the benefit of his students. Read more at <http://boldfish.ieee.org/u/412/04824637>
- IEEE Spectrum Hosts Online Career Forum: On 20 September 2005, IEEE Spectrum will host an online Career Accelerator Forum. It will offer insight and advice on going on for an advanced degree, staying ahead in your field, landing your dream job, and even changing your career. Plus, this interactive event will allow you to ask questions of an expert panel -- all from the convenience of your desktop. For more information, as well as a list of panelists, visit <http://boldfish.ieee.org/u/415/04824637>. To sign up, go to <http://boldfish.ieee.org/u/416/04824637>
- Nominations Invited for Technical Field Awards: The IEEE Awards Board seeks nominations for the 2007 IEEE Technical Field Awards. Deadline for nominations is 31 January 2006. These technical and educational awards, along with their sponsors, are listed at <http://boldfish.ieee.org/u/417/04824637>

- Proceedings of Wireless Communications Symposium Published: The proceedings of the first IEEE International Symposium on Wireless Communication Systems are now available through ShopIEEE. The proceedings includes papers that assess the development of hybrid platforms for wireless communications and others that offer key insights into the future of wireless. For more information, visit <http://boldfish.ieee.org/u/421/04824637>. View additional details in IEEE Xplore: <http://boldfish.ieee.org/u/422/04824637>
- Tien Joins Race for 2006 President-Elect: James M. Tien will be on the ballot for 2006 IEEE President-Elect. He became a candidate by submitting a petition to place his name on the ballot that was signed by more than 3000 members. Find out more at <http://boldfish.ieee.org/u/461/04824637>
- Virtual Museum Sings Electronic Music: Technology and music harmonize in "Songs in the Key of E," the new exhibit on the Web at the IEEE Virtual Museum. The exhibit explores the development of electronic music from its beginnings with the 60-hertz hum, a by-product of the first applications of alternating current, to modern synthesizers. Learn more at <http://boldfish.ieee.org/u/462/04824637>
- Embedded Systems Engineers Have New Online Community: The power of 500 minds thinking simultaneously. That is how IEEE Senior Member Charles Lord regards the IEEE Embedded Systems Virtual Community to which he belongs. And Lord's community is truly a virtual society. Other IEEE groups have virtual communities -- that is, they communicate via the Internet -- but their members also have ways of meeting physically. Not Lord's group. His group's meetings are virtual or not at all. Find out more at <http://boldfish.ieee.org/u/463/04824637>
- Motion Picture Camera Stabilizer Wins Presidents' Scholarship: A stabilization device for a handheld motion picture camera won Adam Daniel Sidman a US \$10,000 scholarship from the IEEE. His "Camera Stabilization: Take 2" project was awarded the 2005 IEEE Presidents' Scholarship at the 56th Intel International Science and Engineering Fair, held in May. Read more at <http://boldfish.ieee.org/u/469/04824637>
- IEEE Offers Best Deal on Publications: Wonder what technical publications cost? Two new studies found that on average IEEE journals, magazines, and periodicals are less than half the price of their competitors. Read more at <http://boldfish.ieee.org/u/512/04824637>
- So You Want to Sell Your Home: Though a home can be the biggest purchase most people will ever make, they won't live in it for very long -- only five to seven years, on average. So deciding to upsize, downsize, or simply change location is only half the story. The other half is making sure you get a good price for the house you're selling. Here are a few practical things to consider when you decide to put your house on the market. <http://boldfish.ieee.org/u/513/04824637>
- California and Michigan Schools Score First in Robots Competition: An alliance of three high school teams took top prize in this year's FIRST Robotics Competition Championship at the Georgia Dome in Atlanta. The trio built and controlled an autonomous robot that beat out robots from more than 460 teams in the two-day competition. Learn more at <http://boldfish.ieee.org/u/514/04824637>
- A Leader in Grid Computing: As a child, IEEE Member Zhiwei Xu did not foresee a career in electrical engineering -- he wanted to be an anthropologist and study human civilization and Chinese literature. But his parents urged him to pursue a more practical vocation, and Xu listened. He enrolled in the computer science program at the University of Electronic Science and Technology of China, in Beijing. Since graduating in 1982, he has become one of China's leaders in grid computing. Find out more at <http://boldfish.ieee.org/u/516/04824637>

- New Proceedings Features Computer Research: Researchers from 32 nations on six continents contributed papers to the 2005 IEEE International Conference on Computer Systems and Applications, held earlier this year in Cairo, Egypt. Conference areas of interest included algorithms and theory; databases and data mining; networking and wireless technology; security and information assurance; and software and applications. The proceedings are available from ShopIEEE at <http://boldfish.ieee.org/u/522/04824637>
- IEEE Hires New Executive Director: Jeffry W. Raynes will be the IEEE's next executive director. He succeeds Daniel J. Senese, who retired in December. Raynes, 51, will take over the position in November. He will serve as the organization's chief operating officer and will manage the IEEE's staff of approximately 900 employees in several U.S. and overseas locations. Read more at <http://boldfish.ieee.org/u/644/04824637>
- Pekarek Goes From Cattle to Computers: In his early years, he was a farm boy on a remote cattle ranch in South Dakota. But now IEEE Member Joseph Pekarek is running a multimillion-dollar computer software company outside Los Angeles. The IEEE Microwave Theory and Techniques Society noted Pekarek's achievements in June and named him the Outstanding Young Engineer of the Year during its annual symposium in Long Beach, Calif. Learn more about Pekarek at <http://boldfish.ieee.org/u/645/04824637>
- Yahoo Service Searches for IEEE Articles : A new search engine, Yahoo Search Subscriptions, is now available to help members find IEEE papers in periodicals to which they subscribe. Previously, searches for IEEE papers could be done only by IEEE Xplore, the institute's document-delivery platform. Read more at <http://boldfish.ieee.org/u/646/04824637>
- Women in Engineering Recognizes Its Outstanding Groups: IEEE Women in Engineering in June selected two of its local groups -- one in Winnipeg, Man., Canada, and the other in Kerala, India -- to receive Group of the Year Awards. The new awards recognize groups that have organized innovative programs in support of female engineers or that have developed outreach efforts to encourage girls to pursue a science or technology career. WIE hopes the annual awards will encourage its other local groups to emulate the award-winning initiatives. Find out more at <http://boldfish.ieee.org/u/648/04824637>
- Tell Us About Your Plant Tours: The Institute wants to interview members who have organized tours of such facilities as power plants, wind farms, planetariums, and manufacturing plants as a way to boost their section or chapter membership. We're especially interested in hearing from members outside the United States. Contact Editor Kathy Kowalenko by e-mail at k.kowalenko@ieee.org or by phone at (732) 562-6825.
- Accelerate Your Career at the IEEE Spectrum Online Forum: On 20 September, IEEE Spectrum will host its first online Career Accelerator Forum. The forum, which is free, will offer advice on such topics as going on for an advanced degree, staying ahead in your field, landing your dream job, and switching careers. You'll also be able to ask questions of an expert panel from the convenience of your desk. For more information, as well as a list of panelists, visit <http://boldfish.ieee.org/u/649/04824637> To sign up for the forum, go to <http://boldfish.ieee.org/u/650/04824637>
- Symposium Links Nuclear Science and Medical Imaging: Radiation technology and medical imaging have been linked since 1895, when Roentgen discovered X-rays. So it's no surprise that medical imaging and nuclear science would be combined in an IEEE conference, the Nuclear Science Symposium and

Medical Imaging Conference, to be held from 24 to 29 October in Fajardo, Puerto Rico. Find out more at <http://boldfish.ieee.org/u/652/04824637>

- Proceedings of Circuits and Systems Symposium Released: New medical technologies -- involving such things as biomedical circuits and systems, very-large-scale-integration systems and applications, and bionics and biomedical applications -- are addressed in the newly released proceedings of the 2005 IEEE International Symposium on Circuits and Systems. The proceedings is available through ShopIEEE at <http://boldfish.ieee.org/u/653/04824637>
- IEEE-USA Supports Hurricane Relief Efforts: In the aftermath of Hurricane Katrina, IEEE-USA President Gerard A. Alphonse sent a message on 2 September to all U.S. IEEE members, expressing concern for the "pain and suffering of tens of thousands of Americans in the Gulf region." Alphonse added that IEEE members in the affected areas of Region 3 (Southeastern U.S.) and Region 5 (Southwestern U.S.) "are all very much in our hearts and minds."

Alphonse announced that IEEE-USA will contribute US \$5000 on behalf of the IEEE's U.S. membership to the American Red Cross to support relief efforts. He also stated that IEEE-USA will make available Professional Activities Committee (PACE) project funds to groups of IEEE members in Regions 3 and 5 to support local volunteer recovery efforts.

To read his letter and updates on IEEE-USA's support of hurricane relief and reconstruction efforts, visit <http://boldfish.ieee.org/u/741/04824637>

- The Candidates Take on the Issues: Leah H. Jamieson, Gerald H. Peterson, and James M. Tien, all running for 2006 IEEE President-Elect, delivered their views on outsourcing, continuing education, free access to IEEE publications, and more at a June forum hosted by the Philadelphia Section. Each of the candidates hopes to succeed Michael R. Lightner, who will be president in 2006. Read more at <http://boldfish.ieee.org/u/742/04824637>
- So Now You Are a Manager: Not all engineers promoted to management love the job, and some don't like it at all. The likely reason for dissatisfaction is a lack of training. All managers must learn the importance of communicating effectively, building relationships, using time efficiently, and seeing the big picture. Find out how at <http://boldfish.ieee.org/u/743/04824637>
- Marketplace of Ideas: The Court's Downloading Decision: The U.S. Supreme Court unanimously ruled that companies offering Internet file-sharing software may be sued for copyright infringement if they have encouraged their users to illegally download songs, movies, or television programs, even if the software has other, legal uses. What do you think of this decision? Weigh in at institute@ieee.org
- Taking the Pulse of the Earth: The IEEE has taken on an important role in support of an ambitious 60-nation enterprise to create a worldwide Earth-monitoring network to address climate, drought, and air and water quality. The decade-long project, known as the Global Earth Observation System of Systems, will bring together data gathered by thousands of gages, sensors, buoys, weather stations, and satellites measuring conditions across the land, oceans, and atmosphere. Find out more at <http://boldfish.ieee.org/u/745/04824637>
- New Journal Sheds Light on Display Technologies: As electronic control spreads to all sorts of products, more displays are needed to tell us what those items are doing or what we've commanded them to do. With the market for displays at nearly US \$100 billion and rising, and with technology research growing apace, there's a need for the new IEEE/OSA Journal of Display Technology. The quarterly, to

be unveiled this month, is sponsored by seven IEEE societies and the Optical Society of America. Learn more at <http://boldfish.ieee.org/u/746/04824637>

- Five New Journals Due in 2006: Product safety, vehicular technology, and information forensics are just some of the topics that members can explore in five new journals from the IEEE Product Safety Engineering Society, the IEEE Computational Intelligence Society, and the IEEE Signal Processing Society. Find out more at <http://boldfish.ieee.org/u/748/04824637>
- Sign Up Today for the IEEE Spectrum Career Accelerator Forum: Time is running out! On 20 September, IEEE Spectrum will host its first online Career Accelerator Forum. The forum, which is free, will offer advice on such topics as going for an advanced degree, staying ahead in your field, landing your dream job, and switching careers. You'll also be able to ask questions of an expert panel from the convenience of your desk. For more information, as well as a list of panelists, visit <http://boldfish.ieee.org/u/749/04824637>. To sign up, go to <http://boldfish.ieee.org/u/750/04824637>.

"Public Is Winner" in Supreme Court's Electronic File-Sharing Case; Court Protects Technological Innovation in MGM vs. Grokster, Says IEEE-USA

WASHINGTON (30 June 2005) -- "The public wins in the Supreme Court's unanimous decision in the electronic file-sharing case announced on 27 June," according to IEEE-USA Intellectual Property Committee Chair Andy Greenberg. Greenberg, who filed IEEE-USA's amicus curiae brief in the MGM vs. Grokster case last January, said that the Court achieved a balance between protecting against copyright infringement and promoting technological innovation. According to IEEE-USA's Greenberg, the Court recognized "the interests of artists in their work and the interests of the public to have access to dynamic and innovative technologies for obtaining and enjoying those works." As a result, IEEE-USA asserts, the public is ensured continued access to music, art and technology.

In the Court's 9-0 opinion, Justice David Souter wrote that "one who distributes a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement, is liable for the resulting acts of infringement by third parties." The Supreme Court adopted an active inducement standard as advocated by IEEE-USA in its amicus brief filed with the Court. The decision imposes liability on companies that actively encourage or "induce" customers through words and deeds to infringe on copyrighted material, which focuses legal scrutiny on the company's infringing conduct rather than restricting its technology.

According to Justice Souter, the active inducement rule "does nothing to compromise legitimate commerce or discourage innovation having a lawful promise." He added that patent law's commerce doctrine, now codified, "leaves breathing room for innovation and a vigorous commerce."

Innovation will not be stifled, according to Justice Souter, who said: "We are, of course, mindful of the need to keep from trenching on regular commerce or discouraging the development of technologies with lawful and unlawful potential...The inducement rule...premises liability on purposeful, culpable expressions and conduct, and thus does nothing to compromise legitimate commerce or discourage innovation having a lawful promise."

IEEE-USA's Greenberg noted: "Active inducement has been part of patent law for more than 100 years, and has stood the test of time. In all that time, the sky has not fallen for technology companies in patent law," and it can be assumed "that a parade of 'horribles' will not follow under copyright principles."

To read the Court's opinion, see <http://wid.ap.org/scotus/pdf/04-480P.ZO.pdf>. To view IEEE-USA's amicus brief in the case, go to <http://www.ieeeusa.org/policy/POLICY/2005/MGMvGrokster.pdf>. For more on inducement, visit IEEE-USA's website at <http://www.ieeeusa.org/policy/issues/INDUCE/index.html>.

**IEEE-USA IN ACTION: IEEE-USA Helps to Shape
Monthly TV News Spots on IEEE Technologies**

WASHINGTON (13 July 2005) -- In collaboration with the American Institute of Physics (AIP), IEEE-USA is helping to shape television news spots about IEEE technologies -- distributed to the top 108 U.S. TV markets. AIP's "Discoveries and Breakthroughs" news service, which each month delivers twelve 90-second broadcasts in English and Spanish to subscribing stations, has a potential reach of more than 80 million households.

"Discoveries" provides a realistic image of how professionals in science, technology, engineering and math contribute to a better quality of life. The AIP service helps to improve technological literacy and to promote the public understanding of engineering and science.

IEEE-USA involvement this year has ensured that more engineering stories are included in news broadcasts, with assistance from "IEEE Spectrum," IEEE Technical Activities and IEEE Corporate Communications staff. In June, news feeds encompassed such IEEE-related technologies as a robotic arm for stroke victims, a mouse adapter for tremors and an oxyride battery.

For sample "Discoveries" video spots, go to <http://www.ivanhoe.com/science/>. The website includes background on each news segment as well as a list of local TV stations on which the spots are aired. Limited copies of CDs of sample segments are available for use by U.S. IEEE volunteers in middle and high schools, and can be obtained through the IEEE-USA contact below.

**IEEE-USA Advocates Protection of Personally Identifiable Health Information, and
Development of Technology-Based National Health Information Network**

WASHINGTON (18 July 2005) -- IEEE-USA is concerned that the Department of Homeland Security's (DHS) authority to access and analyze personal information could lead to privacy breaches of one's personally identifiable health information.

"We believe DHS authority to access and disseminate personally identifiable health data should be restricted unless adequate controls are put in place to ensure the security and confidentiality of that data," according to a position adopted 17 June by the IEEE-USA Board of Directors.

IEEE-USA recommends, among other things, that DHS implement procedures to ensure that personally identifiable health information is not inadvertently used to discriminate against someone in employment and insurance; and to establish accountability and significant penalties for the misuse or abuse of such information.

In a related position, IEEE-USA advocates establishing a National Health Information Network (NHIN) to take advantage of cutting-edge networking technologies, as well as provide secure and reliable access to, and sharing of, health information. The NHIN should not compromise the security and privacy of one's personal health records, according to IEEE-USA.

The organization also stated that NHIN could reduce medical errors resulting from insufficient information regarding a patient's history, prescribed medications and current condition; provide fast access to health data in an emergency situation; and curb rising healthcare costs by eliminating much of the paper-based processing of patient records and insurance claims.

These positions -- "Homeland Security Operations and Use of Personally Identifiable Health Information" and "National Health Information Network, With Emphasis on Security and Privacy Issues" -- were developed by the IEEE-USA Medical Technology Policy Committee. They are available at <http://www.ieeeusa.org/policy/positions/index.html#mtp>.

IEEE-USA Commends Congress for Adopting Reliability, Security Standards for U.S. Electric Power Supply

WASHINGTON (4 August 2005) -- IEEE-USA-supported recommendations to ensure a reliable, adequate and secure supply of electricity are contained in the Energy Policy Act (H.R. 6) of 2005 that Congress passed late last month.

The legislation empowers the Federal Energy Regulatory Commission (FERC) to create an Electric Reliability Organization (ERO) to establish and enforce mandatory reliability standards of the North American electric system, including elements in Canada and Mexico. The ERO will collect dues from bulk power system owners and operators and have the authority to fine those not in compliance.

The energy bill, which the President is expected to sign Monday, also directs the Department of Energy to adopt IEEE Standard 1547 as the national technical standard for interconnecting distributed energy resources to the electric power grid. The "Standard for Interconnecting Distributed Resources with Electric Power Systems," approved by the IEEE Standards Board in June 2003, addresses performance, operation, testing and safety of the interconnection of products and services, such as hardware and software for distributed power control and communication.

"We commend Congress for recognizing the importance of creating the ERO," IEEE-USA Energy Policy Committee Chair Fernando Alvarado said. "Adoption of IEEE 1547 and the creation of the ERO will help ensure the reliability, security and diversity of the electric power grid, which is essential to our nation's economic health and national security."

IEEE-USA has been working on the establishment of an ERO since Nov. 2002, when it released a reliability position (<http://www.ieeeusa.org/policy/positions/reliability.html>). The organization proposed the interconnection standard a year earlier (<http://www.ieeeusa.org/policy/positions/interconnection.html>).

The ERO is designed to help prevent a repeat of the Aug. 2003 cascading blackout that affected 50 million people in the northeastern United States and parts of the Midwest and Canada. IEEE 1547 will facilitate the development of distributed energy generation technologies such as fuel cells, photovoltaics and wind turbines. The standard's criteria and resources also address product quality, interoperability, design, engineering, installation and certification.

U.S. IT Infrastructure Highly Vulnerable to Attack, Feature Story in August Issue of IEEE-USA Today's Engineer

WASHINGTON (5 August 2005) -- The nation's information technology infrastructure, which includes air traffic control systems, power grids, financial systems, and military and intelligence cyber networks, is highly vulnerable to terrorist and criminal attacks, according to an article in the August issue of IEEE-USA Today's Engineer.

"The country's problem with cyber security is very serious, and is going to get worse in the next five years before it gets any better," IEEE-USA Research & Development Policy Committee Chair Cliff Lau told Today's Engineer. "I would say the situation not only is alarming, but is almost out of control."

Author Barton Reppert, who interviewed two members of the President's Information Technology Advisory Committee (PITAC), notes that 100,000 known viruses and worms exist, and that some major end-users are throwing out infected systems rather than trying to fix them. Nevertheless, according to PITAC, there is little federal budgetary support for fundamental research to address the security vulnerabilities of the civilian IT infrastructure, including defense systems.

To read "United States Facing Cyber Security Crisis, Experts Tell Capitol Hill Briefing, As IEEE-USA Prepares New Position Statement," go to <http://www.todaysengineer.org/2005/Aug/cybersecurity.asp>.

Extreme Challenges Await Electrical Engineers' Efforts to Restore Power on Gulf Coast; Feature Story in September Issue of IEEE-USA Today's Engineer

WASHINGTON (2 September 2005) -- Electrical engineers will face extreme challenges in their role to restore power to the Gulf Coast region ravaged by Hurricane Katrina, according to a September article in IEEE-USA Today's Engineer.

"The challenge is to figure out what pieces [of the regional electric grid] are left, put them back together in a sequence that restores as much power as possible, as fast as possible, and that remains stable in operation as conditions change and load is added back to the system," said Harold Adams, a power engineer with Dominion Resources Services in Glen Allen, Va. "The challenge to localized service is similar, but there is a more detailed focus on the particular restoration priorities for local customers and government.

"In all of these cases, manpower and equipment logistics often present a major challenge."

IEEE-USA Today's Engineer conducted a question-and-answer session with Adams and Jack Casazza, two electrical engineers experienced in storm damage and electric system restoration following natural disasters. Both are members of the IEEE Power Engineering Society and IEEE-USA Energy Policy Committee. While engineers can design transmission and distribution systems that help protect against major power loss in severe weather, nothing can be done to guarantee electricity to public facilities, homes and businesses.

"You really cannot storm-proof the system completely," Casazza said. "No matter what you do, the electric power system is going to be subject to interruptions – major interruptions."

To read "Katrina Poses Extreme Challenges for Power Engineers", go to www.todaysengineer.org. To subscribe to Today's Engineer, IEEE members can go to <http://ewh.ieee.org/enotice/options.php?LN=IEEEUSA>. Non-members can visit <http://www.todaysengineer.org/emailupdates/index.html>.

The IEEE Cincinnati Section Executive Committee

Member Names and Phone Numbers

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